

Appn. No.: 09/716,651
Amendment Dated March 29, 2004
Reply to Office Action of December 29, 2004

SDC-100US

Remarks/Arguments:

Claims 1-32 were rejected under the first paragraph of 35 U.S.C. 112 as being failing to comply with the enablement requirement. More specifically, the examiner contends that the "previously decoded sample value" of claim 1 and the "previously decoded symbol" of claims 7, 12, and 22 are not disclosed in the specification. These rejections are overcome by the amendments to the claims which change the "previously decoded sample value" in claim 1 to an "estimate of a ... previous sample value" and replaces the "previously decoded symbol" in claims 7, 12 and 22 with an "estimate of ... a previous sample." Support for this amendment can be found in paragraphs [0047] to [0057].

Accordingly, claims 1-32 are not subject to rejection under the first paragraph of 35 U.S.C. 112 as failing to comply with the enablement requirement.

Claims 7-11 are further rejected under the second paragraph of 35 U.S.C. 112 as being indefinite. This rejection is overcome by amending claim 7 to recite "a decoder and quantizer that is used ..." (emphasis added). Therefore, claim 7 is not subject to rejection under the second paragraph of 35 U.S.C. 112 as being indefinite.

Claims 1-6 are further rejected under 35 U.S.C. 103(a) as being obvious in view of Willming (US#5923711) and Baker et al. (US#5802116). The examiner argues that Willming discloses a method similar to claim 1, but "does not disclose whether each sample value is decoded based on a previously decoded sample value." The examiner then argues that Baker et al. disclose "a Viterbi decoder which decodes each sample value of the successive sample values based on a current sample value of the successive sample values and on a previously decoded sample value." This rejection is overcome by the amendment to claim 1. In particular, neither Willming, Baker et al. nor their combination discloses or suggests "partially decoding and quantizing each sample value of the successive sample values in a single symbol interval," as required by amended claim 1.

The Viterbi decoder of Baker et al. is embodied in a double-pass Viterbi algorithm that computes path metrics in a first path and identifies "most likely transitions" to obtain soft symbols in a second pass. The present Invention, as embodied in amended claim 1, "quantizes each sample value ... in a single symbol interval," that is to say, it executes in a single pass.

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The double-pass methodology of Baker et al. is essential to their invention, and it would not be obvious to one skilled in the art to modify the double-pass Viterbi operation for single-pass operation with Willming. Consequently, claim 1 is not subject to rejection under 35 U.S.C. 103(a) as being obvious in view of Willming and Baker et al. The advantages of decoding the sample value in a single symbol interval are described in paragraphs [0058] through [0060] which provide the basis for this amendment.

Accordingly, claim 1 is not subject to rejection under 35 U.S.C. § 103(a) in view of Willming and Baker et al. Claims 2-6 depend from claim 1 and are not subject to rejection under 35 U.S.C. § 103(a) in view of Willming and Baker et al. for at least the same reasons as claim 1.

In light of the foregoing amendments and remarks, the Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 1-32.

Respectfully submitted,



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Page 11 of 11